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10/668,648

09/23/2003

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EXAMINER

BURROWES, LAWRENCE J

ART UNIT

PAPER NUMBER

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DELIVERY MODE

02/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/668,648	Applicant(s) KARAOGUZ, JEYHAN	
	Examiner LAWRENCE J. BURROWES	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 11, 15, 16, 20-25, 27, 29-31, 35, 36, 38-40, 43, 47-51, 55-62, 65, 67-74, 77 and 79-82 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 10, 12, 13, 17-19, 26, 28, 32-34, 37, 41, 42, 44-46, 52-54, 63, 64, 66, 75, 76, 78, 83 and 84 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 2, 11, 16, 36, 48, 56, 57, 65, 69 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette (71847878) in view of Dress, Jr. et al (6603818) hereafter Dress.

For claim 1, 48 and 56, Mallette disclose a piconet that employs PN (Pseudo-Noise) codes (see column 5 lines 2-4, PN codes) to spread UWB (Ultra Wide Band) pulses to minimize narrowband interference (see column 4 lines 55-67, UWB and interference eliminated), the piconet comprising: a PNC (piconet coordinator) (see Figure 2 Box 206, wireless control concentrator); a plurality of DEVs (user piconet devices) (see Figure 2 box 200-205, wireless consoles); wherein each DEV of the plurality of DEVs and the PNC is operable to communicate with one another using UWB pulses (see column 4 lines 15-49, devices communication wirelessly using UWB); wherein, based on narrowband interference within a spectrum of the UWB pulses that are transmitted across a communication link within the piconet, the PNC assigns a PN code from a plurality of PN codes to spread the UWB pulses transmitted across the communication link (see column 4 line 55 – column 5 line 17, interference is eliminated by the use UWB and PN codes); and wherein, when transmitting a UWB pulse across the communication link, at least one of a DEV of the plurality of DEVs and the PNC spreads the UWB pulse using the PN code that is assigned from the plurality of PN codes (see column 4 line 55 – column 5 line 17, UWB pulses are transmitted wirelessly using unique PN codes).

Mallette teaches all the limitations of the claimed invention except wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around

which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference.

Dress from the same or similar fields of endeavor teaches wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference (see column 11 lines 41-51, the wideband filter reject bands which would eliminate outside interference).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the wideband filter of Dress into the devices by coupling the filter to the transceiver. The motivation to do so would be to reduce potentially harmful interference in the system.

For claim 2, Mallette teaches all the limitations of the claimed invention except wherein: the narrowband interference is substantially centered around a predetermined frequency.

Dress from the same or similar fields of endeavor teaches wherein: the narrowband interference is substantially centered around a predetermined frequency (see column 2 lines 1-3 and column 11 lines 41-51, center frequency noise is alleviated with filtering).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the predetermined frequency of

Dress into the devices by way of programming logic. The motivation to do so would be to reduce potentially harmful interference in the system.

For claims 11 and 65, Mallette teaches all the limitations of the claimed invention except wherein: the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered.

Dress from the same or similar fields of endeavor teaches wherein: the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered (see column 2 lines 1-3 and column 11 lines 41-51, center frequency noise is alleviated analyzing and filtering).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the wideband filter of Dress into the devices by coupling the filter to the transceiver. The motivation to do so would be to reduce potentially harmful interference in the system.

For claim 16, Mallette disclose all the limitations of the claimed invention except wherein: the UWB pulses are implemented according to DSSS (Direct Sequence Spread Spectrum).

Dress from the same or similar fields of endeavor teaches wherein: the UWB pulses are implemented according to DSSS (Direct Sequence Spread Spectrum) (see column 12 lines 14-16, DSSS technology).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement DSSS of Dress into the combined invention by of programming. The motivation to do so would be to enhance adaptability of the devices.

For claims 36, 69 and 77, Mallette disclose a piconet that employs PN (Pseudo-Noise) codes (see column 5 lines 2-4, PN codes) to spread UWB (Ultra Wide Band) pulses to minimize narrowband interference (see column 4 lines 55-67, UWB and interference eliminated), the piconet comprising: a PNC (piconet coordinator) (see Figure 2 Box 206, wireless control concentrator); a plurality of DEVs (user piconet devices) (see Figure 2 box 200-205, wireless consoles); wherein each DEV of the plurality of DEVs and the PNC is operable to communicate with one another using UWB pulses (see column 4 lines 15-49, devices communication wirelessly using UWB); wherein, based on narrowband interference within a spectrum of the UWB pulses that are transmitted across a communication link within the piconet, the PNC assigns a PN code from a plurality of PN codes to spread the UWB pulses transmitted across the communication link (see column 4 line 55 – column 5 line 17, interference is eliminated by the use UWB and PN codes); and wherein, when transmitting a

UWB pulse across the communication link, at least one of a DEV of the plurality of DEVs and the PNC spreads the UWB pulse using the PN code that is assigned from the plurality of PN codes (see column 4 line 55 – column 5 line 17, UWB pulses are transmitted wirelessly using unique PN codes).

Mallette teaches all the limitations of the claimed invention except wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference; and wherein the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered.

Dress from the same or similar fields of endeavor teaches wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference (see column 11 lines 41-51, the wideband filter reject bands which would eliminate outside interference); and wherein the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered (see column 2 lines 1-3 and column 11 lines 41-51, center frequency noise is alleviated with filtering).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the wideband filter of Dress into the devices by coupling the filter to the transceiver. The motivation to do so would be to reduce potentially harmful interference in the system.

For claim 57, Mallette disclose all the limitations of the claimed invention except wherein: the narrowband interference is substantially centered around a predetermined frequency.

Dress from the same or similar fields of endeavor teaches wherein: the narrowband interference is substantially centered around a predetermined frequency (see column 11 lines 41-51, the wideband filter reject bands which would eliminate outside interference).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement DSSS of Dress into the combined invention by of programming. The motivation to do so would be to enhance adaptability of the devices.

5. Claims 9, 43, 62, 74 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, and in further view of Parry (7149529).

For claims 9, 43, 62, 74 and 82, Mallette in view of Dress disclose all the limitations of the claimed invention except wherein: the PNC includes GPS

(Global Positioning System) functionality that is operable to determine the specific location of the PNC within a degree of precision; each DEV of the plurality of DEVs includes GPS functionality that is operable to determine the specific location of that DEV within the degree of precision; and each DEV of the plurality of DEVs communicates information corresponding to its specific location to the PNC.

Parry from the same or similar fields of endeavor teaches wherein: the PNC includes GPS (Global Positioning System) functionality that is operable to determine the specific location of the PNC within a degree of precision; each DEV of the plurality of DEVs includes GPS functionality that is operable to determine the specific location of that DEV within the degree of precision; and each DEV of the plurality of DEVs communicates information corresponding to its specific location to the PNC (see column 4 lines 6-18, GPS device used to determine the relative position of the units).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the GPS of Parry into the combined system by coupling the GPS to the devices. The motivation to do so would be to enhance the location features of the devices.

6. Claims 3-5, 49-51, 58-60 and 70-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, and further in view of the Official Notice.

For claims 3, 49, 58, 70, Mallette in view of Dress disclose all the limitations of the claim invention except wherein: the predetermined frequency is at least one of approximately 2.4 GHz (Giga-Hertz) and approximately 5 GHz. Examiner takes official notice that the use of 2.4 GHz and 5 GHz UWB frequencies is well known in the art.

For claims 4, 50, 59 and 71, Mallette in view of Dress disclose all the limitations of the claim invention except wherein: the interference substantially centered around approximately 5 GHz is generated by an IEEE (Institute of Electrical & Electronics Engineers) 802.11a WLAN (Wireless Local Area Network); and the interference substantially centered around approximately 2.4 GHz is generated by an IEEE 802.11b WLAN. Examiner takes official notice that IEEE standards are well known in the art.

For claims 5, 51, 60 and 72, Mallette in view of Dress disclose all the limitations of the claim invention except wherein: a region in which the IEEE 802.11a WLAN operates is predetermined; and a region in which the IEEE 802.11b WLAN operates is predetermined. Examiner takes official notice that IEEE standards are well known in the art.

Therefore, the motivation to use the standards would be in order to comply with approved standards for communication.

7. Claims 38, 39, 67, 68, 79 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, and further in view of the Official Notice.

For claims 38, 67 and 79, Mallette in view of Dress discloses all the limitations of the claim invention except wherein: the frequency around which the narrowband interference is substantially centered is at least one of approximately 2.4 GHz (Giga-Hertz) and approximately 5 GHz. Examiner takes official notice that the use of 2.4 GHz and 5 GHz UWB frequencies is well known in the art.

For claims 39, 68 and 80, Mallette in view of Dress disclose all the limitations of the claim invention except wherein: the interference substantially centered around approximately 5 GHz is generated by an IEEE (Institute of Electrical & Electronics Engineers) 802.11a WLAN (Wireless Local Area Network); and the interference substantially centered around approximately 2.4 GHz is generated by an IEEE 802.11b WLAN. Examiner takes official notice that IEEE standards are well known in the art.

Therefore, the motivation to use the standards would be in order to comply with approved standards for communication.

8. Claims 6, 15, 21, 22, 27, 31, 40, 61 73 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, and in further view of Green et al (6697628) hereafter Green.

For claim 6, 40, 61, 73 and 81, Mallette in view of Dress disclose all the limitations of the claimed invention except wherein: the PNC transmits UWB pulses to each DEV within the plurality of DEVs; after receiving its respective UWB pulse, each DEV within the plurality of DEVs transmits a UWB pulse back to the PNC; and the PNC performs ranging of the relative position of each DEV within the plurality of DEVs using a time duration of a round trip of the transmitted UWB pulse and the received UWB pulse thereby determining the relative distance between the PNC and each DEV within the plurality of DEVs.

Green from the same or similar fields of endeavor teaches wherein: the PNC transmits UWB pulses to each DEV within the plurality of DEVs; after receiving its respective UWB pulse, each DEV within the plurality of DEVs transmits a UWB pulse back to the PNC; and the PNC performs ranging of the relative position of each DEV within the plurality of DEVs using a time duration of a round trip of the transmitted UWB pulse and the received UWB pulse thereby determining the relative distance between the PNC and each DEV within the plurality of DEVs (see column 7 lines 12-23, position determining device locates the position of the devices with respect to the main station).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement position locator of Green into the combined invention by coupling it to the devices. The motivation to do so would be to enhance the safety features of the device.

For claim 15, Mallette in view of Dress disclose all the limitations of the claimed invention except wherein: the UWB pulses are implemented according to CDMA (Code Division Multiple Access).

Green from the same or similar fields of endeavor teaches wherein: the UWB pulses are implemented according to CDMA (Code Division Multiple Access) (see column 3 lines 36-40, wideband CDMA technology).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement W-CDMA of Green into the combined invention by of programming. The motivation to do so would be to enhance adaptability of the devices.

For claim 21, Mallette disclose a piconet that employs PN (Pseudo-Noise) codes (see column 5 lines 2-4, PN codes) to spread UWB (Ultra Wide Band) pulses to minimize narrowband interference (see column 4 lines 55-67, UWB and interference eliminated), the piconet comprising: a PNC (piconet coordinator) (see Figure 2 Box 206, wireless control concentrator); a plurality of DEVs (user piconet devices); wherein each DEV of the plurality of DEVs and the PNC is operable to communicate with one another using UWB pulses(see column 4 lines 15-49, devices communication wirelessly using UWB); wherein the PNC transmits UWB pulses to each DEV within the plurality of DEVs (see column 4 lines 15-49, devices use UWB pulses); and wherein, when transmitting a UWB

pulse across the communication link, at least one DEV of the plurality of DEVs and the PNC spreads the UWB pulse using the PN code that is assigned from the plurality of PN codes (see column 4 line 55 – column 5 line 17, UWB pulses are transmitted wirelessly using unique PN codes).

Mallette discloses all the limitations of the claimed invention except wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference; wherein after receiving its respective UWB pulse, each DEV within the plurality of DEVs transmits a UWB pulse back to the PNC; and wherein the PNC performs ranging of the relative position of each DEV within the plurality of DEVs using a time duration of a round trip of the transmitted UWB pulse and the received UWB pulse thereby determining the relative distance between the PNC and each DEV within the plurality of DEVs; wherein, based on narrowband interference within a spectrum of the UWB pulses that are transmitted across a communication link within the piconet and based on the relative distance between the PNC and at least one DEV of the plurality of DEVs, the PNC assigns a PN code from a plurality of PN codes to spread the UWB pulses transmitted across the communication link.

Dress from the same or similar fields of endeavor teaches wherein the assigned PN code has at least one narrowband blocking interval that substantially nulls at least one portion of the spectrum of the UWB pulses around

which the narrowband interference is substantially centered thereby substantially eliminating the narrowband interference (see column 11 lines 41-51, the wideband filter reject bands which would eliminate outside interference).

Mallete in view of Dress disclose all the limitations of the claimed invention except wherein after receiving its respective UWB pulse, each DEV within the plurality of DEVs transmits a UWB pulse back to the PNC; and wherein the PNC performs ranging of the relative position of each DEV within the plurality of DEVs using a time duration of a round trip of the transmitted UWB pulse and the received UWB pulse thereby determining the relative distance between the PNC and each DEV within the plurality of DEVs; wherein, based on narrowband interference within a spectrum of the UWB pulses that are transmitted across a communication link within the piconet and based on the relative distance between the PNC and at least one DEV of the plurality of DEVs, the PNC assigns a PN code from a plurality of PN codes to spread the UWB pulses transmitted across the communication link.

Green from the same or similar fields of endeavor teaches wherein after receiving its respective UWB pulse, each DEV within the plurality of DEVs transmits a UWB pulse back to the PNC; and wherein the PNC performs ranging of the relative position of each DEV within the plurality of DEVs using a time duration of a round trip of the transmitted UWB pulse and the received UWB pulse thereby determining the relative distance between the PNC and each DEV within the plurality of DEVs (see column 7 lines 12-23, position determining

device); wherein, based on narrowband interference within a spectrum of the UWB pulses that are transmitted across a communication link within the piconet and based on the relative distance between the PNC and at least one DEV of the plurality of DEVs, the PNC assigns a PN code from a plurality of PN codes to spread the UWB pulses transmitted across the communication link (see column 7 lines 55-64, PN codes are used to determine which device is being located).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement position locator of Green into the combined invention by coupling it to the devices. The motivation to do so would be to enhance the safety features of the device.

For claim 22, Mallette disclose all the limitations of the claimed invention except wherein: the narrowband interference is substantially centered around a predetermined frequency.

Dress from the same or similar fields of endeavor teaches wherein: the narrowband interference is substantially centered around a predetermined frequency (see column 2 lines 1-3 and column 11 lines 41-51, center frequency noise is alleviated with filtering).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the predetermined frequency of Dress into the devices by way of programming logic. The motivation to do so would be to reduce potentially harmful interference in the system.

For claim 27, Mallette teaches all the limitations of the claimed invention except wherein: the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered.

Dress from the same or similar fields of endeavor teaches wherein: the PNC includes interference assessment functionality that is operable to identify a frequency around which the narrowband interference is substantially centered (see column 2 lines 1-3 and column 11 lines 41-51, center frequency noise is alleviated analyzing and filtering).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the wideband filter of Dress into the devices by coupling the filter to the transceiver. The motivation to do so would be to reduce potentially harmful interference in the system.

For claim 31, Mallette disclose all the limitations of the claimed invention except wherein: the UWB pulses are implemented according to at least one of CDMA (Code Division Multiple Access) and DSSS (Direct Sequence Spread Spectrum).

Dress from the same or similar fields of endeavor teaches wherein: the UWB pulses are implemented according to at least one of CDMA (Code Division Multiple Access) and DSSS (Direct Sequence Spread Spectrum) (see column 12 lines 14-16, DSSS technology).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement DSSS of Dress into the combined invention by of programming. The motivation to do so would be to enhance adaptability of the devices

9. Claims 23-25, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, in further view of Green, and further in view of the Official Notice.

For claims 23 and 29, Mallette in view of Dress, in further view of Green disclose all the limitations of the claimed invention except wherein: the predetermined frequency is at least one of approximately 2.4 GHz (Giga-Hertz) and approximately 5 GHz. Examiner takes official notice that the use of 2.4 GHz and 5 GHz UWB frequencies is well known in the art.

For claim 24 and 30, Mallette in view of Dress, in further view of Green disclose all the limitations of the claimed invention except wherein: the interference substantially centered around approximately 5 GHz is generated by an IEEE (Institute of Electrical & Electronics Engineers) 802.11a WLAN (Wireless Local Area Network); and the interference substantially centered around approximately 2.4 GHz is generated by an IEEE 802.11b WLAN. Examiner takes official notice that the use of the IEEE standards is well known in the art.

For claim 25, Mallette in view of Dress, in further view of Green disclose all the limitations of the claimed invention except wherein: a region in which the IEEE 802.11a WLAN operates is predetermined; and a region in which the IEEE 802.11b WLAN operates is predetermined. Examiner takes official notice that the use of the IEEE standards is well known in the art.

Therefore, the motivation to use the standards would be in order to comply with approved standards for communication.

10. Claims 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, in further view of Green, and further in view of Federal Communication Commission (FCC 02-48) here after FCC.

For claim 35, Mallette in view of Dress, in further view of Green disclose all the limitations of the claimed invention except wherein: the UWB pulses are generated using a frequency band of a UWB frequency spectrum that spans from approximately 3.1 GHz (Giga-Hertz) to approximately 10.6 GHz; the UWB frequency spectrum is divided into a plurality of frequency bands; and each frequency band of the plurality of frequency bands has a bandwidth of approximately 500 MHz (Mega-Hertz).

FCC from the same or similar fields of endeavor teaches wherein the UWB pulses are generated using a frequency band of a UWB frequency spectrum that spans from approximately 3.1 GHz (Giga-Hertz) to approximately

10.6 GHz (see page 3 paragraph 5); the UWB frequency spectrum is divided into a plurality of frequency bands (see page 15 paragraph 31); and each frequency band of the plurality of frequency bands has a bandwidth of approximately 500 MHz (Mega-Hertz) (page 14 paragraph 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the spectrum of the FCC standard into the devices. The motivation to do so would be to adhere to the government standards.

11. Claims 20, 47 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallette in view of Dress, in further view of Federal Communication Commission (FCC 02-48) here after FCC.

For claims 20, 47 and 55, Mallette in view of Dress disclose all the limitations of the claimed invention except wherein: the UWB pulses are generated using a frequency band of a UWB frequency spectrum that spans from approximately 3.1 GHz (Giga-Hertz) to approximately 10.6 GHz; the UWB frequency spectrum is divided into a plurality of frequency bands; and each frequency band of the plurality of frequency bands has a bandwidth of approximately 500 MHz (Mega-Hertz).

FCC from the same or similar fields of endeavor teaches wherein the UWB pulses are generated using a frequency band of a UWB frequency

spectrum that spans from approximately 3.1 GHz (Giga-Hertz) to approximately 10.6 GHz (see page 3 paragraph 5); the UWB frequency spectrum is divided into a plurality of frequency bands (see page 15 paragraph 31); and each frequency band of the plurality of frequency bands has a bandwidth of approximately 500 MHz (Mega-Hertz) (page 14 paragraph 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the spectrum of the FCC standard into the devices. The motivation to do so would be to adhere to the government standards.

Allowable Subject Matter

12. Claims 7, 8, 10, 12, 13, 17-19, 26, 28, 32-34, 37, 41, 42, 44-46, 52-54, 63, 64, 66, 75, 76, 78, 83 and 84 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Walker et al (20040048574) and Sugaya et al (20040008641).

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE J. BURROWES whose telephone number is (571) 270-1419. The examiner can normally be reached on Monday - Thursday 5:30am - 2pm EST.

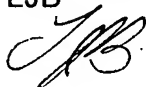
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:
10/668,648
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